

**CLAIMS**

1. A method of treating or preventing a pathological condition of the uterus in a female individual, the method comprising administering to the individual at least one agent that prevents  $\text{PGF}_{2\alpha}$  having its effect on the FP receptor.
2. A method according to Claim 1 wherein the pathological condition of the uterus is associated with abnormal growth of cells of the myometrium or endometrium.
3. A method according to Claim 1 or 2 wherein the pathological condition of the uterus is uterine carcinoma or an endometrial or myometrial pathological condition.
4. A method according to Claim 3 wherein the endometrial pathological condition is endometriosis.
5. A method according to Claim 3 wherein the myometrial pathological condition is fibroids.
6. A method according to any one of Claims 1 to 5 wherein the agent that prevents  $\text{PGF}_{2\alpha}$  having its effect on the FP receptor prevents or reduces the binding of  $\text{PGF}_{2\alpha}$  to the FP receptor.
7. A method according to any one of Claims 1 to 6 wherein the agent that prevents  $\text{PGF}_{2\alpha}$  having its effect on the FP receptor affects the interaction between  $\text{PGF}_{2\alpha}$  and the FP receptor, or the interaction between the FP receptor and the associated  $G_{\alpha q}$  protein, thus inhibiting or disrupting a  $\text{PGF}_{2\alpha}$ -FP mediated signal transduction pathway.
8. A method according to any one of Claims 1 to 7 wherein the agent is an antagonist of the FP receptor.

9. A method according to Claim 8 wherein the FP receptor antagonist ~~42~~ <sup>43</sup> any one or more of PGF<sub>2α</sub> dimethyl amide; PGF<sub>2α</sub> dimethyl amine; AL-8810 ((5Z,13E)-(9S,11S,15R)-9, 15-dihydroxy-11-fluoro-15-(2-indanyl)-16,17,18,19,20-pentanoic acid); AL-3138 (11-deoxy-16-fluoro PGF<sub>2α</sub>); phloretin; glibenclamide; ridogrel; PHG113; PCP-1 (rvkfksqqhrqgrshhlem); PCP-2 (rkavlknlyklasqccgvhvislhiwelssiknsilkvaaisespvaeksast); PCP-3 (clseeakearrindeierqlrrdkrdarre-NH<sub>2</sub>); PCP-4 (kdtlqlnlkeynlv-NH<sub>2</sub>); PCP-8 (ilghrdyk); PCP-10 (wedrfyll); PCP-13 (ILGHRDYK); PCP-14 (YQDRFYLL); (ILAHRDYK); PCP-13.7 (ILAHRDYK); PCP-13.8 (ILaHRDYK); PCP-13.11 (ILGFRDYK); PCP-13.13 (ILGHKDYK); PCP-13.14 (ILGHRNYK); PCP-13.18 (ILGHQDYK); PCP-13.20 (ILGHRDY-amide); PCP-13.21 (ILGHRDYK-amide); PCP-13.22 (ILGWRDYK); PCP-13.24 (ILGXRDYK); and PCP-15 (SNVLCISIF).
10. A method according to any one of Claims 1 to 7 wherein the agent is an antagonist of PGF<sub>2α</sub>.
11. A method according to Claim 10 wherein the PGF<sub>2α</sub> antagonist is an anti-PGF<sub>2α</sub> antibody.
12. A method according to any of Claims 1 to 11 wherein an inhibitor of PGES and/or an antagonist of EP2 or EP4 is also administered to the individual.
13. A method according to Claim 12 wherein the antagonist of EP2 or EP4 is one or more of AH6809, an omega-substituted prostaglandin E derivative described in WO 00/15608 (Ono Pharm Co Ltd), AH23848B, AH22921X, IFTSYLECL, IFASYECL, IFTSAECL, IFTSYEAL, ILASYECL, IFTSTDCL, TSYEAL (with 4-biphenylalanine), TSYEAL (with homophenylalanine), a 5-thia-prostaglandin E derivative described

in WO 00/03980 (Ono Pharm Co Ltd), 5-butyl-2,4-dihydro-4-[[2'-[N-(3-chloro-2-thiophenecarbonyl)sulfamoyl]biphenyl-4-yl]methyl]-2-{2-(trifluoromethyl)phenyl]-1,2,4-triazol-3-one potassium salt, 5-butyl-2,4-dihydro-4-[[2'-[N-(2-methyl-3-furoyl)sulfamoyl]biphenyl-4-yl]methyl]-2-{2-(trifluoromethyl)phenyl]-1,2,4-triazol-3-one, 5-butyl-2,4-dihydro-4-[[2'-[N-(3-methyl-2-thiophenecarbonyl)sulfamoyl]biphenyl-4-yl]methyl]-2-{2-(trifluoromethyl)phenyl]-1,2,4-triazol-3-one, 5-butyl-2,4-dihydro-4-[[2'-[N-(2-thiophenecarbonyl)sulfamoyl]biphenyl-4-yl]methyl]-2-{2-(trifluoromethyl)phenyl]-1,2,4-triazol-3-one, and 5-butyl-2,4-dihydro-4-[[2'-[N-[2-(methypyrrole)carbonyl]sulfamoyl]biphenyl-4-yl]methyl]-2-{2-(trifluoromethyl)phenyl]-1,2,4-triazol-3-one.

14. Use of at least one agent that prevents  $\text{PGF}_{2\alpha}$  having its effect on the FP receptor, in the manufacture of a medicament for treating or preventing a pathological condition of the uterus in a female individual.
15. Use according to Claim 14, wherein the individual is administered an inhibitor of PGES and/or an antagonist of EP2 or EP4.
16. Use of an inhibitor of PGES and/or an antagonist of EP2 or EP4 in the manufacture of a medicament for treating or preventing a pathological condition of the uterus in a female individual, wherein the individual is administered at least one agent that prevents  $\text{PGF}_{2\alpha}$  having its effect on the FP receptor.
17. Use of a combination of at least one agent that prevents  $\text{PGF}_{2\alpha}$  having its effect on the FP receptor, and an inhibitor of PGES and/or an antagonist of EP2 or EP4, in the manufacture of a medicament for treating or preventing a pathological condition of the uterus in a female individual.

18. Use according to any one of Claims 14-17 wherein the pathological condition of the uterus is uterine carcinoma or an endometrial or myometrial pathological condition.
19. A pharmaceutical composition comprising at least one agent that prevents  $\text{PGF}_{2\alpha}$  having its effect on the FP receptor for treating or preventing a pathological condition of the uterus in a female individual.
20. A pharmaceutical composition according to Claim 19 and also comprising an inhibitor of PGES and/or an antagonist of EP2 or EP4.
21. A pharmaceutical composition according to Claim 19 or 20 wherein the pathological condition of the uterus is uterine carcinoma or an endometrial or myometrial pathological condition.
22. A vaginal ring or a tampon or an intrauterine device comprising at least one agent that prevents  $\text{PGF}_{2\alpha}$  having its effect on the FP receptor.
23. A vaginal ring or a tampon or an intrauterine device according to Claim 22 wherein the agent comprises an antagonist of the FP receptor.
24. A vaginal ring or a tampon or an intrauterine device according to Claim 23 wherein the FP receptor antagonist comprises any one or more of  $\text{PGF}_{2\alpha}$  dimethyl amide;  $\text{PGF}_{2\alpha}$  dimethyl amine; AL-8810 ((5Z,13E)-(9S,11S,15R)-9, 15-dihydroxy-11-fluoro-15-(2-indanyl)-16,17,18,19,20-pentanoic acid); AL-3138 (11-deoxy-16-fluoro  $\text{PGF}_{2\alpha}$ ); phloretin; glibenclamide; ridogrel; PHG113; PCP-1 (rvkfksqqhrqgrshhlem); PCP-2 (rkavlnklyklasqccgvhvislhiwelssiknslkvaaisespvaeksast); PCP-3 (clseeakearrindeierqlrrdkrdarre- $\text{NH}_2$ ); PCP-4 (kdtlqlnlkeynlv- $\text{NH}_2$ ); PCP-8 (ilghrdyk); PCP-10 (wedrfyll); PCP-13 (ILGHRDYK); PCP-14 (YQDRFYLL); (ILAHRDYK); PCP-13.7 (ILAHRDYK); PCP-13.8 (ILAHRDYK); PCP-

- 13.11 (ILGFRDYK); PCP-13.13 (ILGHKDYK); PCP-13.14 (ILGHRNYK); PCP-13.18 (ILGHQDYK); PCP-13.20 (ILGHRDY-amide); PCP-13.21 (ILGHRDYK-amide); PCP-13.22 (ILGWRDYK); PCP-13.24 (ILGXRDYK); and PCP-15 (SNVLCSIF).
25. A vaginal ring or a tampon or an intrauterine device according to Claim 22 wherein the agent comprises an antagonist of  $\text{PGF}_{2\alpha}$ .
  26. A vaginal ring or a tampon or an intrauterine device according to Claim 25 wherein the  $\text{PGF}_{2\alpha}$  antagonist comprises anti- $\text{PGF}_{2\alpha}$  antibodies.
  27. A vaginal ring or a tampon or an intrauterine device according to any one of Claims 22 to 26 further comprising an inhibitor of PGES and/or an antagonist of EP2 or EP4.
  28. A vaginal ring or a tampon or an intrauterine device according to Claim 27 wherein the antagonist of EP2 or EP4 is one or more of AH6809, an omega-substituted prostaglandin E derivative described in WO 00/15608 (Ono Pharm Co Ltd), AH23848B, AH22921X, IFTSYLECL, IFASYECL, IFTSAECL, IFTSYEAL, ILASYECL, IFTSTDCL, TSYEAL (with 4-biphenylalanine), TSYEAL (with homophenylalanine), a 5-thia-prostaglandin E derivative described in WO 00/03980 (Ono Pharm Co Ltd), 5-butyl-2,4-dihydro-4-[[2'-[N-(3-chloro-2-thiophenecarbonyl)sulfamoyl]biphenyl-4-yl]methyl]-2-{2-(trifluoromethyl)phenyl]-1,2,4-triazol-3-one potassium salt, 5-butyl-2,4-dihydro-4-[[2'-[N-(2-methyl-3-furoyl)sulfamoyl]biphenyl-4-yl]methyl]-2-{2-(trifluoromethyl)phenyl]-1,2,4-triazol-3-one, 5-butyl-2,4-dihydro-4-[[2'-[N-(3-methyl-2-thiophenecarbonyl)sulfamoyl]biphenyl-4-yl]methyl]-2-{2-(trifluoromethyl)phenyl]-1,2,4-triazol-3-one, 5-butyl-2,4-dihydro-4-[[2'-[N-(2-thiophenecarbonyl)sulfamoyl]biphenyl-4-yl]methyl]-2-{2-(trifluoromethyl)phenyl]-1,2,4-triazol-3-one, and 5-butyl-2,4-dihydro-4-

[[2'-[N-[2-(methypyrrole)carbonyl]sulfamoyl]biphenyl-4-yl]methyl]-2-{2-(trifluoromethyl)phenyl}-1,2,4-triazol-3-one.

29. A composition comprising at least one agent that prevents  $\text{PGF}_{2\alpha}$  having its effect on the FP receptor, and an inhibitor of PGES and/or an antagonist of EP2 or EP4.
30. A pharmaceutical composition comprising at least one agent that prevents  $\text{PGF}_{2\alpha}$  having its effect on the FP receptor, and an inhibitor of PGES and/or an antagonist of EP2 or EP4, and a pharmaceutically acceptable carrier.
31. A composition according to Claim 29 for use in medicine.